WENCK File #B2579-0015
December 2015

Great River Energy 230 kV Transmission Line Reroute Post-Construction Inspection Report PU-12-398

Prepared for:

North Dakota Public Service Commission

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Responsive partner.
Exceptional outcomes.

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APPENDICES

1.0 Executive Summary

The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the 230 kV DC Transmission Line Reroute (Project) in Nelson and Ramsey Counties, North Dakota (ND), owned and operated by Great River Energy (GRE). Construction of the Project was completed in April 2013. Wenck reviewed all Project documents to identify those aspects that required compliance and visually inspected the Project area on 24 November 2015.

During the inspection, Wenck observed that the Project appears to have generally been constructed according to the specifications. New transmission line structures appear to have been installed at the locations described in the Project Application. Much of the site has been restored to its previous use. No significant issues were documented during the inspection.

There were several non-critical issues that may need to be resolved for the Project to be considered complete and in full compliance, including written verification of some items. Wenck expects follow-up actions taken by Great River Energy to address these particular issues can be corroborated in writing or photos and will not require a subsequent site visit. Wenck recommends the PSC take the following steps to resolve these issues.

Recommended Action Steps

- **Review internally, clarify, then request if needed**
  - Verification of Nelson and Ramsey County - Floodplain Administrators approval/permits
  - Verification of removal of old transmission line structures
  - Verification of compliance with the National Electric Safety Code
  - Ten-Year Plan

- **Expect Later, Request if Necessary**
  - Tree and Shrub Survival Report

2.0 Background and Scope

2.1 INTRODUCTION

The 230 kV Transmission Line Reroute (Project) is located in Nelson and Ramsey Counties, ND. The Project consists of rerouting approximately 4 miles of transmission line in order to remove several structures from wetland areas. The Project is owned and operated by Great River Energy (GRE). The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Order in Case No. PU-12-398 on 6 December 2012, granting a Certificate of Corridor Compatibility for a Transmission Facility No. 140 and Route Permit No. 153.

2.2 PURPOSE

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Post-construction inspections ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order). The North Dakota PSC retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Project.

2.3 METHODS AND SCOPE OF INSPECTION

2.3.1 Project Compliance Items Identified

Wenck identified a list of "Project Specifications" which GRE was obligated or responsible to follow and that can be verified either in written documentation or by an on-site inspection. These items were taken from 1) siting laws and rules, 2) Project activities or specifications proposed in the Application for a Certificate of Corridor Compatibility (Application), 3) Orders, and 4) recommendations by other agencies. These Project specifications are listed in Table 2.1 under 7 categories: Siting & Location; Project Design & Engineering; Pre-Construction; Cultural Resources; Natural Resources; Construction, Reclamation & Soils; and Operation.

2.3.2 Document Review

Wenck staff reviewed publicly-available Project documents in the PSC Online Case Search (ND PSC, 2015) to find written verification of compliance for the Project specifications listed in Table 2.1. If written verification was filed, the findings are described in Section 3 and the source and name of the documentation is listed in Table 2.1, Column 3 (Written Verification). Green boxes in the table represent Project specifications that are potentially non-compliant because they have no written verification.

2.3.3 On-Site Inspection

Sam Swanberg, a Wenck Environmental Scientist, visited the Project site on 24 November 2015. The site was inspected visually by walking the transmission line route and examining several points of interest within the corridor. Points of interest included new transmission line structures, connections to existing structures, and wetlands. Digital photographs (Canon Power Shot A2500, 16 megapixel) were taken showing typical Project infrastructure

and documenting problem areas (see Appendix A). Geographic coordinates were recorded at observation points or potential problem areas using a handheld Global Positioning System (GPS) (Trimble GeoXT sub meter accuracy; NAD83 datum).

If Project specifications were verified during the site inspection, the findings are described in Section 3. In Table 2.1, Column 4 (Site Verification), green boxes represent Project specifications that are potentially non-compliant because they could not be verified during the site inspection.

Table 1: Project Specifications with Written or Site Verification Information

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
	SITING & LOCATION		
App. pp. 1, 5; Findings of Fact 2, 4	The proposed reroutes occur in two segments of an existing 230 kV transmission line that travels between Grand Forks and Devils Lake, North Dakota. The Project is located in Nelson and Ramsey Counties, ND, near the cities of Lakota and Crary.	N/A	Section 3.1.1
App. p. 6; Findings of Fact 4	The first section involves the relocation of approximately 1.4 miles of transmission line, including 11 transmission structures, south of the high water in segment 7 near the city of Lakota. The second section relocation of approximately 1.8 miles of transmission line, including 13 transmission structures to the north of the high water in segment 8 near the city of Crary.	N/A	Section 3.1.1
ND Admin. Code Article 69-06-08; App. pp. 7-8, 24; Findings of Fact 16-21	Siting Criteria analysis – exclusion, avoidance, selection, and policy. Avoidance areas: historical resources, woodlands, wetlands.	Docket #4, 25, Application	Section 3.1.2
App. p. 25; Exhibit 3	Approximately 1.23 acres for Segment 7 reroute and 1.37 acres for the Segment 8 reroute of land currently used for agricultural production would be permanently converted to use as an energy transmission facility. This is due to the relocation of the transmission line structures. The rest of the project area would remain available for farming.	None	Section 3.1.3
	PROJECT DESIGN & ENGINEERING		
App. pp. 5, 14; Findings of Fact 5	The Project consists of rerouting sections of the line will be constructed using wood H-frame structures of similar design as the existing transmission line. The wood poles would be either cedar or Douglas fir pressure treated with Penta oil. The structure height will vary from 80-100 feet. Span lengths will range from 600-800 feet; however, longer spans may be necessary in certain areas depending on topography.	Docket #4, 25, Application	Section 3.2.1

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
App. pp. 22, 33; Findings of Fact 3, 9	Project shall meet or surpass all relevant state codes, National Electric Safety Code (NESC), Avian Power Line Interaction Committee (APLIC) raptor-safe design standards, and all appropriate safety standards.	Docket #4, 25, Application	Section 3.2.2
Fact of Findings 32; Exhibit 10	Abandoned transmission structures located in the standing water at the level just above the existing rock piles or foundations supporting and protecting the structures will be removed.	Docket #36, Exhibit 10; Docket #46, Compliance filing	Section 3.2.3
Certification Order 31, 33	Provide engineering design drawings prior to construction upon request.	Docket #47, 48, Compliance filing	N/A
Certification Order 34	Provide as-built design specifications and associated GIS files within 3 months after construction complete.	Docket #56, Compliance Filing	N/A
	PRE-CONSTRUCTION		
NDCC 49-22-07.1; ND Admin. Code Article 69-06-03	Letter of Intent.	Docket #1, Letter of Intent	N/A
NDCC 49-22-08; ND Admin. Code Article 69-06-04	Application for a Certificate of Corridor Compatibility	Docket #4, Application	N/A
NDCC 49-22-07; Certification Order 7, 38	Certificate of Corridor Compatibility; subject to suspension or revocation	Docket #39, Order	N/A
NDCC 49-22-04; ND Admin. Code Article 69-06-02;	Ten-Year Plan	None	N/A
Certification Order 2, 5	Conduct Pre-construction Conference. Provide notice of intent to start construction. Provide weekly updates on construction activities.	None; None; Docket #50, 51, Progress Reports	N/A
Certification Order 3, 4	Compliance with rules and regulations of other jurisdictional agencies. Obtain permits and approvals from other agencies and provide copies to the Commission prior to applicable permitted activity.	Docket #4, 25, Application, Appendix D; Docket #46, 47, 48, 49, Compliance Filing	N/A

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Certification Order 32	Inform Commission of plans to modify the transmission facility or site plan, and obtain written approval. Any facilities not included in current Application must be applied for in a separate Route Permit or Site Certificate.	None filed to date	Section 3.3.4
	CULTURAL RESOURCES		
App. p. 24; Certification Order 11, 12	If any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made, report filed with the Commission and the State Historical Society, and clearance to proceed is given.	None reported to date	N/A
App. p. 24; Certification Order 11	State Historical Society: Complete a Class III (pedestrian) survey of the project area for review by State Historical Society.	Docket #46, Compliance Filing	N/A
	NATURAL RESOURCES		
Certification Order 10	Report presence of critical habitat or T+E species, bald or golden eagles during construction and operation.	None reported to date	N/A
Certification Order 20	Tree and shrub removal and replacement will comply with "Tree and Shrub Mitigation Specifications."	Docket #53, Compliance filing	Section 3.5.6
Certification Order 20	Complete a tree and shrub survey and submit to the Commission.	Docket #52, Tree Inventory; Docket #53, Compliance filing	N/A
App. p. 34	Construction to take place in the winter months to avoid avian breeding seasons.	Docket #4, 25, Application; Docket #50, 51 Progress Reports	N/A
App. pp. 40-41	Provide construction plans to USFWS and ND Game and Fish Department.	Docket #4, 25, Application, Appendix D	N/A
App. p. 40, Appendix D	ND State Water Commission: All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.	Docket #4, 25, Application, Appendix D	Section 3.6.6
	CONSTRUCTION, RECLAMATION & SOILS		
App. pp. 15, 21	Implement appropriate erosion control measures.	None	Section 3.6.1

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Certification Order 14; App. pp. 14, 16	Temporarily disturbed areas and roads will be restored to original condition. Pre-existing township and county roads used during construction restored to equal or better condition. Restoration of area as soon as practicable upon completion of construction.	Docket #4, 25, Application	Section 3.6.2
Certification Order 15	Construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land.	None	N/A
Certification Order 16	During construction, at least 12 inches of topsoil, where available, must be stripped and separated from subsoil. Topsoil and subsoil must be segregated and replaced separately.	None	None
Certification Order 17	Reclamation, fertilization, and reseeding are to be done according to the NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission.	None	None
Certification Order 22, 23	Repair/replace all damaged fences and gates. Repair/replace damaged drainage tile.	None	Section 3.6.5
Certification Order 24	No staging areas on land not owned by Company, unless otherwise negotiated with landowners.	None	None
Certification Order 25	Waste removed and disposed regularly.	None	Section 3.6.6
NDCC 49-23; Certification Order 37, 38	Notify the Commission if any damage occurs to underground facilities during construction, suspend construction until compliance with One-Call Excavation Notice System requirements has been determined and clearance to proceed has been given.	None reported to date	N/A
App. p. 40, Appendix D	ND Department of Health: Minimize fugitive dust emissions created during construction, adverse effects to water bodies, and noise.	None	None
App. p. 15, Appendix D	Impacted areas to be revegetated with species native to Project area.	None	Section 3.6.4

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
	OPERATION		
Certification Order 8, 28, 29	Construct and operate in accordance with Application and safety requirements. Maintain records of compliance with Order and Certificate of Site Compatibility. Extraordinary events (e.g. injuries, T+E wildlife fatalities, discovery of large numbers of dead birds or bats) reported within 5 business days.	None reported to date	Section 3.7.1
Certification Order 18, 19, 25	Reclamation and maintenance throughout life of facility. Waste removed & disposed regularly.	None	Section 3.7.1
Certification Order 21, 30	Mitigate any increase in television and residential radio interference that results from the construction of the facility. Establish a procedure for handling complaints concerning the proposed facility.	None	N/A
Certification Order 27	Provide any necessary safety measures for traffic control or to restrict public access to transmission facility.	None	Section 3.7.4

*** Green boxes indicate potential non-compliance items**

3.0 Findings

3.1 SITE INFORMATION

3.1.1 Designated Location

The Project was built generally as proposed in the designated location described in the Application and Order (see Appendix A). Maps of the approved corridor and observations of structures during the site inspection appeared to coincide. The new transmission line structures were observed in upland areas and outside of wetlands.

3.1.2 Siting Criteria

Siting criteria were analyzed in detail in the Application for the Project (Docket #4, 25, Application). Wenck confirmed during the site inspection that there were no exclusion or avoidance areas within the Project area. Wenck also confirmed that impacts to selection and policy criteria were considered and kept at a minimum. Minor impacts to agricultural production are described in Section 3.1.3.

3.1.3 Land Use & Agricultural Impacts

Installation of the new transmission line structures has resulted in approximately 1.23 acres for the Segment 7 reroute and 1.37 acres for the Segment 8 reroute of active farmland being converted to use as a transmission facility (Docket #28, Exhibit 3, Amendment to Application). Wenck confirmed during the site inspection that the area surrounding the new structures has resumed its previous agricultural production use (see Appendix A, Photos 8, 10, 11, 14 and 15).

3.2 PROJECT DESIGN & ENGINEERING

3.2.1 Structure Specifications

New wooden structures were observed along the new transmission line route; the structures were either double pole with H-frame structures or triple pole structures with guywires (see Appendix A, Photos 1, 4, 10, 11, 13, and 14). Structures were backfilled with rocks and/or soil (see Appendix A, Photos 2, 3, and 8). Span lengths and structure heights appeared to match those specified in the Application.

3.2.2 Codes and Specifications

There was no written verification of compliance with the National Electric Safety Code (NESC) or Avian Power Line Interaction Committee (APLIC) raptor-safe standards. Wenck observed during the site inspection that it appears the Project complies with the raptor-safe design standards.

Great River Energy (GRE) stated in their Application that proper safeguards will be implemented for construction and operation of the Project facilities. The Project facilities will be designed according to local, state, and NESC standards regarding ground clearance, crossing utilities clearance, building clearance, strength of materials, and Right-of-Way (ROW) widths. Construction crews and/or contract crews will comply with local, state, and NESC standards regarding facility installation and standard construction practices. GRE will use established industry safety procedures that will be followed during and after rerouting of the transmission line, including clear signage during all construction activities (Docket #4, 25, Application). GRE contacted the USFWS for recommendations. USFWS recommended guidelines that can be found in “Suggested Practices for Raptor Protection on Power Lines:

The State of the Art in 1996" and “Mitigating Bird Collisions with Power Lines: The State of the Art in 1994" (Docket #4, 25, Application).

3.2.3 Abandoned/Removed Structures

The Project “Guide for Cutting Off Existing Pole” (Docket #36, Exhibit 10) shows a diagram of the existing poles to be cut off at the existing rock structures surrounded by water. Meeting minutes from a phone conversation with the ND Game and Fish about the abandoned transmission line poles within Crary Wildlife Management area state that the poles should be pulled, but leave the rock piles. Since the activities would occur in the winter on ice, no permit was needed (Docket #46, Compliance filing).

Wenck confirmed that existing structures along the original alignment have been removed. The rock remains and the top of a cut structure near rock level were observed in the wetland of section 7 of the transmission line (see Appendix A, Photo 6). This area was raised about 1-2 feet above the water surface, but it was difficult to see this in detail due to limited access through the wetland areas. No other evidence of structures along the original alignment was observed, though with limited access to the wetland areas it is possible that other structures were not entirely removed.

3.2.4 Engineering Design Drawings

Engineering design drawings were provided February 2013 prior to construction (Docket #47, 48, Compliance filing).

3.2.5 As-Built Drawings and GIS Files

As-built alignment drawings were uploaded on 21 May 2014 (Docket #56, Compliance filing – final As-Builts). The as-built drawings were inspected in relation to the on-the-ground infrastructure of the facility and appeared to coincide.

3.3 PRE-CONSTRUCTION

3.3.1 PSC-Required Documents

A Letter of Intent was filed with the PSC on 25 June 2012 (Docket #1, Letter of Intent). The PSC moved that the one-year waiting period between filing the Letter of Intent and the Siting Application be shortened to 45 days (Docket #2, Commission Motion acknowledging Letter of Intent). The Application for Certificate of Corridor Compatibility and Route Permit was submitted on 4 September 2012. (Docket #4, Application). The PSC issued Certificate of Corridor Compatibility No. 147 and Route Permit No. 158 on 12 December 2012 (Docket #29, Order). Great River Energy did not file a Ten-Year Plan with the PSC in 2012.

3.3.2 Pre-Construction Conference/Weekly Updates

There was no documentation of a pre-construction meeting or letter of intent to start construction. A letter to the Public Service Commission from GRE stated that a preconstruction conference has been scheduled for 14 February 2013 (Docket #46, Compliance filing). Construction reports were filed for two weeks of construction (Docket # 50,51, Progress Reports).

3.3.3 Permits and Approvals from Other Agencies

Letter documentation for the Project from agencies included: Department of the Army (Corps of Engineers), North Dakota State Water Commission, State Historic Preservation Office (SHPO), North Dakota Game and Fish Department, North Dakota Department of Transportation, North Dakota Department of Health (Docket #25, Exhibit 1, Application, Appendix D). Along with approved jurisdiction determination form from the Department of

the Army (Corps of Engineers) (Docket #46, Compliance filing). Phone conversation meeting minutes were on file about the special use permit on abandoned transmission line poles and structures within the Crary Wildlife Mangement Area. The permit was not needed since activities to remove the poles would occur during the winter (Docket #46, Compliance filing).

The permit from North Dakota Department of Health – North Dakota Pollution Discharge Elimination System (NDPDES) - General Permit for Stormwater Discharges (Docket #49, Compliance Filing) and the Application for utility permit on county roads – Nelson County (Docket#47, Compliance filing- road permit) were on file.

Meeting minutes from the Nelson County auditor to approve the conditional use permit for Great River Energy to reroute their transmission line contingent upon acquiring lawful easements before construction begins. Also on file were meeting minutes from Ramsey County to approve the transmission line reroute project contingent on the Stevens and South Minnewaukan Townships approval (Docket #46, Compliance filing).

Email correspondence with Lake Alice Wetland Management District (WMD), Devils Lake WMD and US Fish and Wildlife Service were filed with the PSC (Docket #24, Exhibit 1, Application, Appendix D).

3.3.4 PSC Approval of Modifications

There were no notifications to modify the facility filed to date. Observations of on-the-ground infrastructure coincided with maps on the Application.

3.4 CULTURAL RESOURCES

3.4.1 Cultural Site Avoidance

The North Dakota State Historical Society reviewed the Class III Cultural Resources Survey and concurred with the “No Historic Properties Affected” and “No Significant Sites” determination (Docket #46, Compliance filing).

A class III cultural resources survey was completed for the two Project Corridors to locate and identify cultural resources within the Project Corridors. The survey included a visual inspection of the Project Corridors, pedestrian survey, and examination of soil exposures and soil probes (Docket #4, 25, Application). No previously identified National Register of Historic Places (NRHP) eligible structures are located within two miles of the survey area. No standing structures were identified within the survey area. Four archaeological sites were identified within the Project Corridors. Three prehistoric sites are NRHP ineligible lithic scatters in significantly disturbed fields. The other site was a large farmstead. No impacts to cultural resources are anticipated. The three lithic scatter areas will not be impacted by the transmission structures.

3.4.2 Reporting of New Discoveries

No new discoveries of cultural, archeological, or historical sites have been reported to the PSC to date and no discoveries were recorded on the weekly construction reports for the Project. Presumably no new sites were encountered during construction of the Project.

3.5 NATURAL RESOURCES

3.5.1 Wetlands, Surface Water, and Floodplain

A wetland delineation report was not included in the Application. The National Wetland Inventory figure was included in the Application, there are many wetlands in the Project area, and the USFWS hold wetland easement on many of the parcels within the Project area (Docket #4, 25, Application). According to a letter from the USACE (dated 31 August 2012) (Docket # 46, Compliance filing), the Project sites contain both jurisdictional and nonjurisdictional waters. The primary purpose of the Project was to remove transmission line structures from wetland areas and relocate them to upland areas. Temporary construction occurred within the wetland while removing the structures. Wenck verified during the site inspection that the structures within the wetland appeared to be removed (as noted in Section 3.2.3), and that there don't appear to be any significant impacts to the wetland.

Wenck verified during the site inspection that there were no bodies of water located within the new transmission line structures. However, surface water was observed in the immediate vicinity of the transmission line (see Appendix A, Photos 1, 15 and 16). In addition, surface water was present beneath the transmission line (see Appendix A, Photo 16). The structures in this area appeared to be located in upland areas and were not inundated.

The North Dakota State Water Commission stated in a letter (dated 2 June 2012) that there are floodplains identified and/or mapped in the proposed Project area, and that permitting is done by a local entity, which has jurisdiction in the area in question (Docket #4, Application, Appendix D). There was no documentation from the Floodplain Administrators for Grand Forks County, Ramsey County and Nelson County on file.

3.5.2 Ground-dwelling Wildlife

Temporary impacts to ground-dwelling wildlife were expected due to construction activity. However, due to the relatively small area being affected, long-term impacts to such wildlife are not expected. Wenck did not observe any impacts to wildlife during the site inspection.

3.5.3 Avian Species

Similar to other wildlife, temporary impacts to avian species during construction were expected. No long-term impacts are anticipated. Wenck did not observe any impacts to avian species during the site inspection.

In an email dated 16 May 2012, the USFWS made recommendations regarding known rare, threatened and endangered species within the general project area. According to the Application, GRE will work with the USFWS to identify areas where the lines should be marked to prevent injury and death from line collisions. The transmission line will be designed considering the suggested guidance documents regarding prevention of raptor electrocutions.

3.5.4 Threatened and Endangered Species

Several threatened, endangered, and candidate species are listed near the Project area. There were no Endangered, Threatened or Species of Concern that have been identified within either reroute corridor. Due to the Project being a minor reroute of a small portion of an existing transmission facility, the Project was anticipated to have no effect on those species.

3.5.5 Reporting
There were no reports filed documenting the presence of threatened or endangered species or bald or golden eagles during construction or operation to date and no observations were recorded on the weekly construction reports for the Project. It is assumed none were observed during construction.

3.5.6 Tree & Shrub Mitigation
GRE filed a tree inventory and Impact Report along with the planting plans and records (Docket #52 – Tree inventory; Docket #53, Compliance filing – revised planting plan). The Commission approved the tree replacement plan on 29 January 2014 (Docket #54, Commission motion approving tree replacement plan; Docket #55, letter enclosing motion approving tree replacement plan).

3.6 CONSTRUCTION, RECLAMATION & SOILS

3.6.1 Erosion and Sedimentation Control
The Project Application states that Best Management Practices (BMPs) would be utilized during construction to minimize the potential for sedimentation and erosion control. The ND Department of Health (NDDoH) requested that the project minimize fugitive dust, degradation of waterways, manage stormwater, and noise (Docket #4, 25, Application, Appendix D). No erosion problems were observed during the site inspection. Fugitive dust and noise were presumably controlled during construction.

3.6.2 Reclamation and Roads
The Project did not require cutting into any existing roadways. Roads accessing the site appeared to be in a condition typical for the area and do not appear to have been negatively impacted by construction traffic. Temporary access paths had been used, but no evidence of disturbance was observed during the site inspection.

Areas disturbed during construction appear to have been mostly restored to their previous condition. Around most of the new structures there is an area approximately 5 to 10 feet in diameter where tall grass and weeds are present, a few of the areas were likely sprayed with pesticides, but otherwise crop growth around the structures appears to be good (see Appendix A, Photos 8, 10, 14, 15 and 16). Wenck also observed possible settling of one structure, holes near the guywire anchors and dark stained soil around many of the poles (see Appendix A, Photos 2, 3, 8 and 9).

No written verification of NRCS recommendations for reclamation, fertilization, and reseeding has been provided to the PSC.

3.6.3 Construction Management
Two construction reports were submitted for the project, covering two weeks total (Docket #50, 51, Progress Reports). It is assumed that these reports cover the entirety of the Project. No issues were reported, and construction appears to have been completed in March 2013.

3.6.4 Reseeding
The application stated that disturbed areas will be restored to their original condition to the maximum extent practicable. Reseeding disturbed areas (due to construction activity) with like vegetation and restoring them to their original condition to the extent possible (Docket #4, 25, Application).

3.6.5 Repairs
No damages to property were observed during the site inspection.

3.6.6 Waste
The Project area was free of debris and equipment. A letter from the North Dakota State Water Commission stated that all waste material associated with the project must be disposed of properly and not placed in identified floodway areas (Docket #4, 25, Application, Appendix D).

3.7 OPERATION

3.7.1 Operation and Maintenance
The site appeared to be operating as described in the Application. There is likely little maintenance required due to the nature of the transmission facility and work done by landowners on the adjacent agricultural land.

Wenck observed few small areas of weeds near the structures, possible settling of one structure and holes near the guywire anchors, as noted in Section 3.6.2 (see Appendix A, Photos 2, 3, 8 and 9).

3.7.2 Safety & Record-keeping
No concerns were identified during the site inspection that would indicate that Project construction or operation was out of compliance with the Application or safety regulations. Weekly reports document no safety concerns. No injuries or extraordinary events have been reported to date.

3.7.3 Public Complaints
No records of complaints regarding the facility have been filed to date.

3.7.4 Public Safety
Access to the transmission facility is not limited in any way. However, electrical components of the facility are not easily accessible and the Project spans private property used for agricultural production, so safety concerns regarding the public appear to be minimal.

4.0 Issues to Resolve and Recommendations

4.1 PROJECT SPECIFICATIONS NEEDING WRITTEN VERIFICATION

Several components of the Project were asserted in the Application or proposed construction and could be verified in writing, but have not been filed with the PSC. Table 2-1 summarizes these items, which are indicated as those shaded green in the "Written Verification" column, indicating no written verification was provided where applicable and necessary. Wenck does not consider any of these items to be critical for Project compliance. However, Wenck suggests they be on file with the PSC to confirm compliance. Wenck recommends the PSC request from Great River Energy the following list of "Necessary" items, and if the PSC deems appropriate, the list of "Potential" items could also be requested.

Necessary Items

- Ten-Year Plan

Potential Items

- Verification of Nelson and Ramsey County - Floodplain Administrators approval/permits
- Verification of compliance with the National Electric Safety Code

4.2 ABANDONED/REMOVED STRUCTURES

Due to limited access around the wetland areas, it was unclear if all the structures were fully removed, or if it was just cut off and abandoned with the foundation remaining. Wenck recommends that the PSC request documentation from GRE showing that all old structures along the original alignment were fully removed.

5.0 Conclusions

Overall, the Project appeared to have been constructed as designed, with minimal impacts to the surrounding natural or human environment. The Project site was well-maintained and in good condition. However, Wenck observed several issues that may need to be resolved before the Project is considered complete and in full compliance. This includes: clarification of the Ten-Year plan, verification of obtained permits from regulating agencies (Floodplain Administrators), and verification of complete removal of transmission line structures. None of these are critical issues, but the PSC should determine which are necessary for the company to comply with and then notify the company what actions are required on their part.

6.0 References

North Dakota Public Service Commission (ND PSC). 2015. Online Case Search. Available from: http://www.psc.nd.gov/database/company_case_list.php. Accessed November 2015.

7.0 Signatures

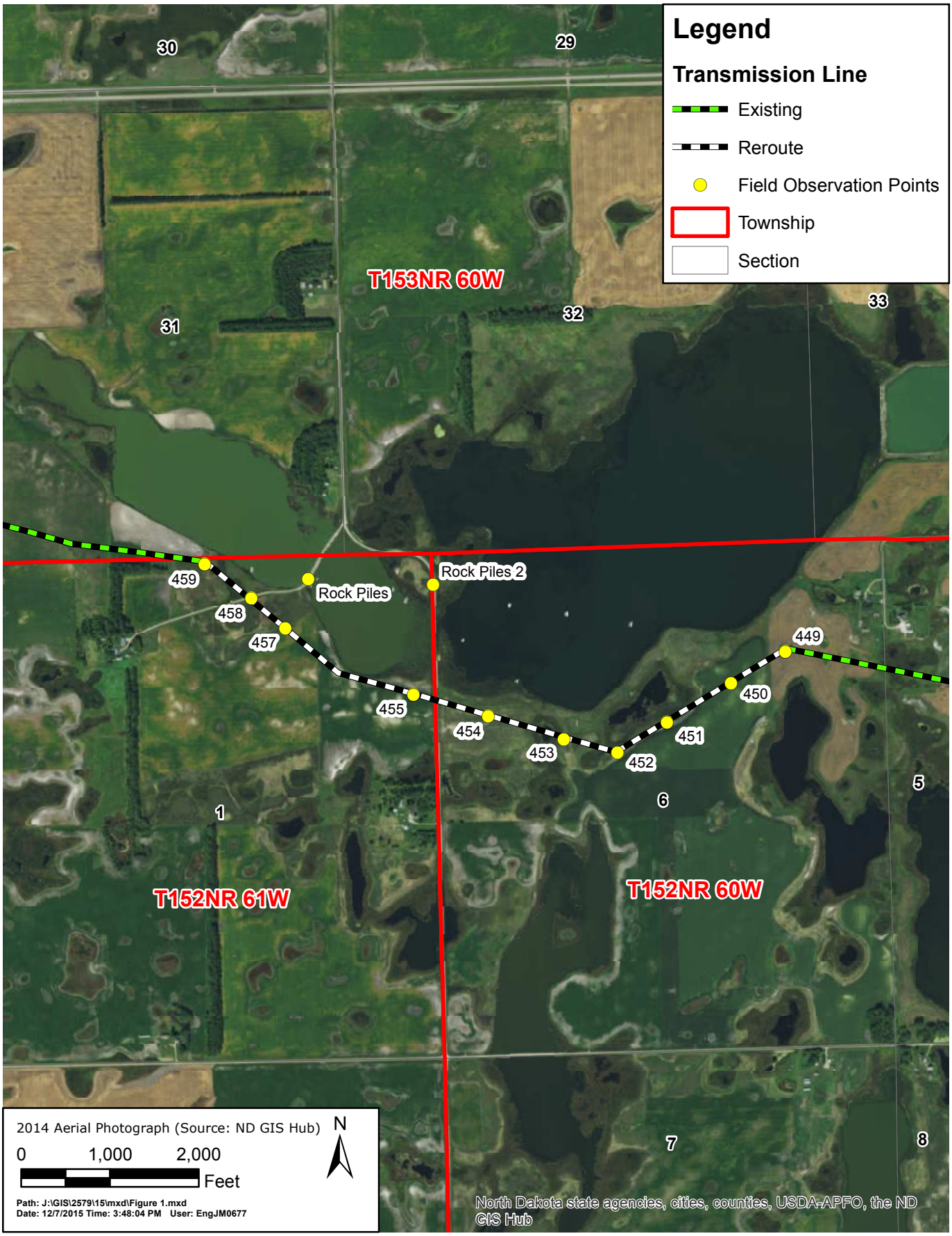
The services performed by Wenck scientists for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

Lead Project Manager, Kevin Magstadt, and Environmental Scientist, Samantha Swanberg, prepared the report.

Kevin Magstadt, P.E., Principal/Regional Manager — Date 12/11/2015

Samantha Swanberg, Environmental Scientist — Date 12/11/2015

Figures



NORTH DAKOTA PUBLIC SERVICE COMMISSION

Field Observation Map

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

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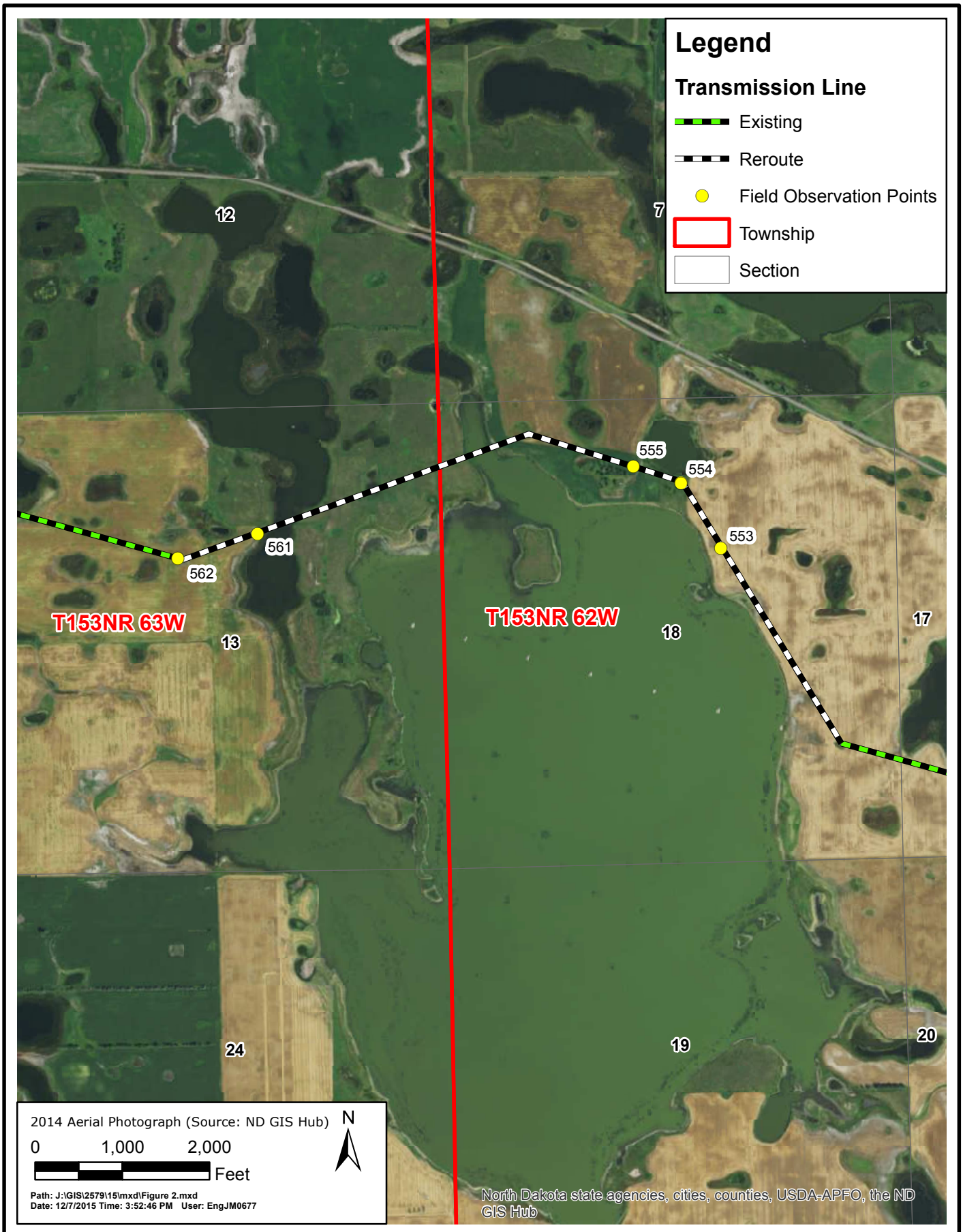
Figure 1



NORTH DAKOTA PUBLIC SERVICE COMMISSION

Field Observation Map

WENCK ASSOCIATES

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Figure 2

Photographs

Above: Photo 1 (Structure 459) – Reroute connection to existing transmission line structure at west end of Segment 7 reroute of the Project in Nelson County. Part of the field below had been burned. Looking northwest.

Below: Photo 2 (Structure 459) – Structure's base is below ground level, shows possible settling.

Above: Photo 3 (Structure 459) – Structure's base shows possible settling, as rocks are below ground level, shown on the right side.

Below: Photo 4 (Structure 458) – Typical double pole structures with H-frame cross arms and braces. Looking east.

Above: Photo 5 (Structure 457) – Typical double pole structure showing bird diverters along line. Looking southeast.

Below: Photo 6 (Observation Point rock piles 1) – Rock pile in wetland where old structure was, can see cut wooden pole.

Above: Photo 7 (Observation Point rock piles 2) – Rock piles in wetland where old structures were located. Looking east.

Below: Photo 8 (Structure 450) – Dark stained soil/rocks around the structure. Weeds were observed between the 2 poles of the transmission line structure (only one pole shown).

Above: Photo 9 (Structure 452) – Small hole approximately 6 inches deep where guywire anchors from 3-pole structure connect to the ground.

Below: Photo 10 (Structure 455) – Structures going through agriculture field. Weeds and grasses between poles of structure.

Above: Photo 11 (Structure 554 (far right), and 555) – Structures crossing grassy area and agriculture field. Looking northwest.

Below: Photo 12 (near structure 554) – Abandoned Rocks piles from old structures in section 8 (Crary). Looking south.

Above: Photo 13 (Structure 553) – Typical double pole structure. Bird diverters along line.

Below: Photo 14 (Structure 562) – Triple pole structure with guy wires. Structure between agriculture field and wetland. Looking northeast.

Above: Photo 15 (Structure 450) – Double pole structure along agriculture field and near wetland. Looking southwest.

Below: Photo 16 (Structure 561) – Double pole structure next to agriculture field crossing over wetland. Bird diverters along line. Looking northeast.

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